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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/826,536 | 04/16/2004 | Claude Barlier | CIRTES2 | 2145 |

7590 08/10/2005

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| EXAMINER |
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AFTERGUT, JEFF H

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| ART UNIT | PAPER NUMBER |
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1733

DATE MAILED: 08/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/826,536

Applicant(s)

BARLIER, CLAUDE

Examiner

Jeff H. Aftergut

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-12 rejected under 35 U.S.C. 103(a) as being unpatentable over Feygin '352 in view of Kinzie '312 or alternatively Kinzie '312 in view of Feygin '352 either of which is further taken with either one of Thomas et al or Weaver.

Feygin '352 suggested that it was known at the time the invention was made to form a three dimensional model by assembling a plurality of cut pieces of sheet material. The cur pieces were assembled together by providing openings within the individual layers which were aligned with pins and/or bolts which where disposed through the individual sheets when assembled. Feygin '352 suggested that one skilled in the art would have provided openings 80 in the sheets and aligned the same with pins in order to form a three dimensional object, see column 8, lines 13-20, column 11, lines 6-14, and column 14, lines 57-68. The reference suggested the use of pins 78 as well as openings 80 within the individual sheets in order to assemble the individual sheets together. The reference additionally suggested that those skilled in the art would have utilized weaken portions 158, Figure 13, column 10, line 67-column 11, line 5. while the reference did not expressly state that the holes depicted in Figure 13 of the individual sheet were used to assemble the individual layers into a three dimensional object, the openings appear in the same position as openings 80 in the other sheets

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such as in Figure 12 and one skilled in the art would have been expected to utilize the openings in Figure 13 to assemble the individual layers to make the three dimensional object in the manner directed by the reference. Additionally, while the reference did not expressly state that portions 158 were frangible, it appears to be the same removal of material as described by applicant to provide the frangible portions and therefore one skilled in the art at the time the invention was made would have been expected to provide such as frangible portions (note that the portions 158 are referred to as thin strips which were stated to be removed after the lamination of the individual layers together). The incorporation of openings in Figure 13 to facilitate the assembly of the individual layers in Feygin '352 as suggested with regard to Figure 12 and as depicted in but not labeled in Figure 13 would have been obvious to those skilled in the art at the time the invention was made as such would have facilitated the proper alignment of the individual plies to make the three dimensional object.

While it is believed the Feygin '352 suggested that those skilled in the art would have employed the thin strips as frangible portions which were easily cut and removed from the two dimensional pieces once assembled into the three dimensional assembly, the reference to Kinzie '312 is cited to further evidence that those skilled in the art would have employed such frangible portions. Kinzie '312 suggested that those skilled in the art at the time the invention was made would have assembled a plurality of sheets together wherein the same included tabs 67 of material which were retained in the sheets until it was time to assemble the sheet materials together wherein the sheets were glued together and the tab portions 67 were cut from the waste material and the

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desired colored portions of sheet material were assembled together. See column 8, lines 30-53. certainly, it would have been within the purview of the ordinary artisan to utilize the thin portions of Feygin '352 in the manner described by applicant as the reference to Kinzie '312 suggested the same.

The reference to Kinzie '312 clearly formed a three dimensional part from a plurality of laminations wherein the waste material was separated from the laminations subsequent to the lamination operation in order to provide the specified three dimensional part. While the reference to Feygin '352 may have intended the portions 156, 154 to have been part of the finished assembly for the particular three dimensional part so formed (such as a mold), the reference was generic to any kind of three dimensional shape desired. The ordinary artisan would have readily understood that the formation of a shape such as that of a three dimensional object which was a solid object by itself would have been obvious in light of Kinzie '312 who formed various three dimensional shapes from the laminations alone where solid shapes were included as part of the finished assembly and the cut out portion was completely separated from the remainder of the three dimensional object. As the reference to Feygin '352 was generic in the description of the type of three dimensional object being formed, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form a solid three dimensional object such as proposed by Kinzie '312 utilizing the process of Feygin '352 wherein the portions 158 were completely removed to form a separate three dimensional part from the remaining waste portions. Additionally, it would have been obvious to one of ordinary skill in the art to employ the alignment

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arrangement of Feygin '352 in the operation of Kinzie '312 (such as described with reference to Figure 13) as such would have afforded one flexibility in design and allowed for proper alignment of the pieces.

The combination failed to teach the specific aligning means (pins or bolts to align the laminations). Each one of Thomas et al or Weaver suggested that when manufacturing a three dimensional object one skilled in the art at the time the invention was made would have incorporated openings within the individual plies through which pins were inserted in order to assemble the individual layers together. The applicant is more specifically referred to Thomas et al where the pins 52 were utilized to align the sheets 38 through registration holes 42, see column 5, lines 26-44, for example.

Weaver suggested that one would have provided the various sheet laminations with holes 26 therein which were aligned with pins 25 to assemble the pieces together, see column 5, lines 12-24, column 6, lines 62-column 7, line 4, column 7, lines 25-30.

because it would have ensured that there was proper registration between the individual layers where were formed by cutting the individual sheets, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate openings through which pins were disposed in order to properly align the individual layers as suggested was known in the art by any one of Thomas et al or Weaver in the operation of manufacturing a three dimensional object from individual plies as suggested by the combined teachings of Kinzie '312 and Feygin '352. Use of pins and/or bolts to secure the individual layers of Feygin '352 as depicted in Figure 13 would have been within the purview of the ordinary artisan.


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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff H. Aftergut whose telephone number is 571-272-1212. The examiner can normally be reached on Monday-Friday 7:15-345 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on 571-272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jeff H. Aftergut
Primary Examiner
Art Unit 1733

JHA
August 8, 2005